Manual

Bst DNA Polymerase, Exonuclease Minus 50,000 units/mL

For Research Use Only. Not for use in diagnostic procedures.

IMPORTANT
-20 ºC storage required
immediately upon receipt

BIOSEARCH™ TECHNOLOGIES
GENOMIC ANALYSIS BY LGC

Manual

Bst DNA Polymerase, Exonuclease Minus 50,000 units/mL

1. Product description

Bst DNA Polymerase, Exonuclease Minus, 50,000 units/mL.

2. Product specifications

Storage buffer: 10 mM Tris-HCl, pH 7.5, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1% Triton® X-100 (Rohm & Haas) and 50% Glycerol.

Stability: Bst DNA Polymerase, Exonuclease Minus is stable for one year from the date received if stored at -20 °C.

Recommended reaction conditions: 50 units Bst DNA Polymerase, Exonuclease Minus; 1X DNA Polymerase Buffer B containing 20 mM Tris-HCl pH 8.8, 10 mM $(NH_4)_2SO_4$, 10 mM KCl, 2 mM $MgSO_4$ and 0.1 % Triton X-100.

Activity determination: One unit catalyses the incorporation of 10 nmol of dNTP into acid-insoluble material in 30 minutes at 65 °C in 20 mM Tris-HCl pH 8.8, 10 mM $(NH_4)_2SO_4$, 10 mM KCl, 2 mM $MgSO_4$, 0.1 % Triton X-100, 30 nM M13mp18 ssDNA, 70 nM M13 sequencing primer(-47) 24 mer, 200 µM dGTP, dATP, dTTP, dCTP (a mix of unlabeled and [^{33}P]dCTP) and 0.1 mg/ml BSA.

Absence of endonuclease or nicking activity: Incubation of 50 units of Bst DNA Polymerase, Exonuclease Minus with 1 µg of pUC19 DNA for 16 - 18 hours at 37 °C resulted in no smearing of bands detected by agarose gel electrophoresis.

Absence of exonuclease activity: Incubation of 50 units of Bst DNA Polymerase, Exonuclease Minus with 1 µg of *Hin*dIII-cut lambda DNA for 16 hours at 37 °C and 65 °C resulted in no smearing of bands on agarose gels. Single stranded and double stranded exonuclease activities were tested by incubating 10 µL of enzyme at 50 units/µL with radiolabeled DNA substrate for one hour at 37 °C and 65 °C, resulting in less than 0.1% release of TCA-soluble counts.

Purity*:* >90% pure by SDS PAGE. No detectable DNA contamination. 10 µL of enzyme at 50 units/µL of the sample was tested for *E. coli* genomic DNA contamination by PCR amplifying with the *E. coli* 16S ribosomal primers.

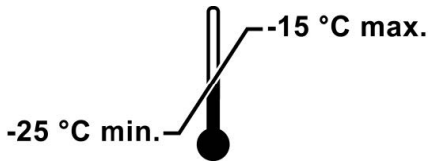
Heat inactivation: 80 °C for 20 minutes.

3. Product designations and kit components

Product	Concentration	Kit size	Catalogue number	Reagent description	Part number	Volume
Bst DNA Polymerase, Exonuclease Minus 50,000 units/ml	50,000 units/mL	10,000 units	30028-1	Bst DNA Polymerase, Exonuclease Minus (50 units/µL)	F93636-1	200 µL
				10X DNA Polymerase Buffer B	F98637-1	4.8 mL

4. Storage conditions

Store all kits and components at -20 °C



5. Applications

1. DNA sequencing through high GC regions[1, 2]
2. Rapid Sequencing from nanogram amounts of DNA template[3]

6. References

1. Griffin H and Griffin A 1994 *PCR Technology*, 228-229.
2. McClary J *et al.* 1991 *J. DNA Sequencing and Mapping*, 1, 173-180
3. Mead DA *et al.* 1991 *Biotechniques*, 11, 76-87.

7. Technical support

If you require any further support, please do not hesitate to contact our Technical Support Team: techsupport@lgcgroup.com.

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GEN/954/EK/0123

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